HUMAN CASUALTIES AND STRUCTURAL DAMAGE DUE TO METEORITE FALLS FOUND IN EAST ASIAN HISTORIES

Kevin Yau, Paul Weissman and Donald Yeomans Earth and Space Sciences Division, Jet Propulsion Laboratory, Pasadena, CA 91109.

Although deaths due to meteorites striking individuals are rare and poorly documented, a number of such reports do exist in Chinese annals over the past two and a half millennia. We present the results of a search for records of human casualties and damage to buildings due to meteorite falls in China during the past 600 years during which provincial records have been kept, Four cases of human fatalities (some involving multiple deaths) and 13 incidents of structural damage have been found. The frequency derived from the Chinese records is one fatal incident every 150 years in China, which implies one fatal incident every 30 years for the entire world, assuming that the Chinese population is roughly 20% of the world population at any time. Note that this number has not been adjusted for the growth in population over time, The frequency derived from the Chinese annals is compared with the estimated frequency derived from current statistics of observed meteorite falls. Based on the observed falls and given the current world population, the expected number of human casualties at the present is one death every 60 years. The reason for the disagreement in these two estimates is not readily apparent.